

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method of amplifying RNA sequences comprising:

- a) reverse transcribing of RNA to form cDNA;
- b) self-ligating said cDNA to form ~~concatemers or~~ circular cDNA products; and
- c) amplifying the ligated cDNA products by rolling circle amplification using random-sequence primers and DNA polymerase.

Claim 2 (original): The method of claim 1, wherein the DNA polymerase has strand displacement activity.

Claim 3 (original): The method of claim 1, wherein the DNA polymerase is selected from the group consisting of *Thermoanaerobacter thermohydrosulfuricus* DNA polymerase, *Thermococcus litoralis* DNA polymerase I, *E. coli* DNA polymerase I, *Taq* DNA polymerase I, *Tth* DNA polymerase I, *Bacillus stearothermophilus* (*Bst*) DNA polymerase I, *E. coli* DNA polymerase III, bacteriophage T5 DNA polymerase, bacteriophage M2 DNA polymerase, bacteriophage T4 DNA polymerase, bacteriophage

T7 DNA polymerase, bacteriophage phi29 DNA polymerase, bacteriophage PRD1 DNA polymerase, bacteriophage phi15 DNA polymerase, bacteriophage phi21 DNA polymerase, bacteriophage PZE DNA polymerase, bacteriophage PZA DNA polymerase, bacteriophage Nf DNA polymerase, bacteriophage M2Y DNA polymerase, bacteriophage B103 DNA polymerase, bacteriophage SF5 DNA polymerase, bacteriophage GA-1 DNA polymerase, bacteriophage Cp-5 DNA polymerase, bacteriophage Cp-7 DNA polymerase, bacteriophage PR4 DNA polymerase, bacteriophage PR5 DNA polymerase, bacteriophage PR722 DNA polymerase and bacteriophage L17 DNA polymerase.

Claim 4 (original): The method of claim 1, wherein the cDNA is converted into double-stranded cDNA prior to the self-ligating step.

Claim 5 (original): The method of claim 1, wherein the random-sequence primers are nuclease resistant.

Claim 6 (currently amended): A method of amplifying RNA sequences comprising:

- a) reverse transcribing of RNA to form cDNA using a primer that comprises the sequence of an RNA polymerase promoter;
- b) self-ligating the said cDNA to form ~~concatemers or~~ circular cDNA products;

- c) amplifying the resulting ligated cDNA by rolling circle amplification using random-sequence primers and DNA polymerase; and
- d) transcribing the resulting amplified, promoter-containing DNA using RNA polymerase.

Claim 7 (original): The method of claim 6, wherein the DNA polymerase has strand displacement activity.

Claim 8 (original): The method of claim 6, wherein the RNA polymerase is T7 RNA polymerase, T3 RNA polymerase or SP6 RNA polymerase.

Claim 9 (original): The method of claim 6, wherein the DNA polymerase is selected from the group consisting of *Thermoanaerobacter thermohydrosulfuricus* DNA polymerase, *Thermococcus litoralis* DNA polymerase I, *E. coli* DNA polymerase I, *Taq* DNA polymerase I, *Tth* DNA polymerase I, *Bacillus stearothermophilus* (*Bst*) DNA polymerase I, *E. coli* DNA polymerase III, bacteriophage T5 DNA polymerase, bacteriophage M2 DNA polymerase, bacteriophage T4 DNA polymerase, bacteriophage T7 DNA polymerase, bacteriophage phi29 DNA polymerase, bacteriophage PRD1 DNA polymerase, bacteriophage phi15 DNA polymerase, bacteriophage phi21 DNA polymerase, bacteriophage PZE DNA polymerase, bacteriophage PZA DNA polymerase, bacteriophage Nf DNA polymerase, bacteriophage M2Y DNA polymerase,

bacteriophage B103 DNA polymerase, bacteriophage SF5 DNA polymerase,
bacteriophage GA-1 DNA polymerase, bacteriophage Cp-5 DNA polymerase,
bacteriophage Cp-7 DNA polymerase, bacteriophage PR4 DNA polymerase,
bacteriophage PR5 DNA polymerase, bacteriophage PR722 DNA polymerase and
bacteriophage L17 DNA polymerase.

Claim 10 (original): The method of claim 6, wherein the cDNA is converted into double-stranded cDNA prior to the self-ligating step.

Claim 11 (original): The method of claim 6, wherein the random-sequence primers are nuclease resistant.

Claim 12 (original): The method of claim 6, wherein said primer further comprises a restriction enzyme recognition sequence and wherein the amplified, promoter containing DNA is treated with a restriction enzyme prior to transcribing.

Claim 13 (original): The method of claim 6, wherein said primer comprises an RNA polymerase termination sequence.

Claim 14 (currently amended): A method of amplifying RNA sequences comprising:

- a) reverse transcribing RNA to form cDNA;

- b) self-ligating the cDNA to form ~~cointamers or~~ circular cDNA products; and
- c) amplifying the resulting self-ligated cDNA by rolling circle amplification using one or more specific sequence primers ~~by isothermal specific sequence primer based DNA amplification.~~

Claim 15 (original): The method of claim 14, wherein 1 to 50 said specific sequence primers are used.

Claim 16 (original): The method of claim 14, wherein said one or more specific sequence primers are each independently between 7 and 50 nucleotides long.

Claim 17 (original): The method of claim 16, wherein said one or more specific sequence primers are each independently between 12 and 25 nucleotides long.

Claim 18 (currently amended): The method of ~~claim 1~~ claim 14, wherein the DNA polymerase has strand displacement activity.

Claim 19 (currently amended): The method of ~~claim 1~~ claim 14, wherein the DNA polymerase is selected from the group consisting of *Thermoanaerobacter thermohydrosulfuricus* DNA polymerase, *Thermococcus litoralis* DNA polymerase I, *E. coli* DNA polymerase I, *Taq* DNA polymerase I, *Tth* DNA polymerase I, *Bacillus*

stearotherophilus (*Bst*) DNA polymerase I, *E. coli* DNA polymerase III, bacteriophage T5 DNA polymerase, bacteriophage M2 DNA polymerase, bacteriophage T4 DNA polymerase, bacteriophage T7 DNA polymerase, bacteriophage phi29 DNA polymerase, bacteriophage PRD1 DNA polymerase, bacteriophage phi15 DNA polymerase, bacteriophage phi21 DNA polymerase, bacteriophage PZE DNA polymerase, bacteriophage PZA DNA polymerase, bacteriophage Nf DNA polymerase, bacteriophage M2Y DNA polymerase, bacteriophage B103 DNA polymerase, bacteriophage SF5 DNA polymerase, bacteriophage GA-1 DNA polymerase, bacteriophage Cp-5 DNA polymerase, bacteriophage Cp-7 DNA polymerase, bacteriophage PR4 DNA polymerase, bacteriophage PR5 DNA polymerase, bacteriophage PR722 DNA polymerase and bacteriophage L17 DNA polymerase.

Claim 20 (currently amended): The method of ~~claim 1~~ claim 14, wherein the cDNA is converted into double-stranded cDNA prior to the self-ligating step.

Claim 21 (original): The method of claim 14, wherein said one or more specific sequence primers are nuclease resistant.

Claim 22 (original): A method of producing labeled DNA comprising, amplifying DNA according to the method of claim 1 or 14, wherein said amplifying step further comprises

including one or more detectably labeled nucleotide analogs or one or more nucleotide analogs providing a means for direct or indirect attachment of a detection label.

Claims 23-24 (cancelled)

Claim 25 (original): A method of producing labeled RNA comprising, amplifying RNA according to the method of claim 6, wherein said transcribing step d), further comprises including one or more detectably labeled nucleotide analogs or one or more nucleotide analogs providing a means for direct or indirect attachment of a detection label.

Claims 26-27 (cancelled)

Claim 28 (currently amended): A method of identifying an RNA sequence comprising, amplifying RNA according to the method of any one of claims 1, 6 or ~~13~~ 14, and identifying the resulting amplified RNA by a sequence dependent detection method.

Claim 29 (currently amended): An RNA amplification kit comprising reverse transcriptase, ligase, phi29 DNA polymerase, ~~and~~ RNA polymerase, and nuclease resistant primers.

Appl. No. 10/770,657
Amendment dated November 21, 2006
Reply to Office action of August 21, 2006

Claim 30 (currently amended): The RNA amplification kit of claim 29, ~~further~~
~~comprising wherein said nuclease resistant primers are random sequence amplification~~
primers.